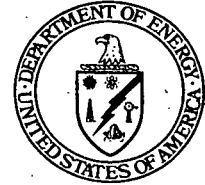


Department of Energy

**Ohio Field Office
Fernald Area Office**

P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155



4114

30 JAN 2002

Mr. James A. Saric, Remedial Project Manager
U.S. Environmental Protection Agency
Region V, SRF-5J
77 West Jackson Boulevard
Chicago, IL 60604-3590

DOE-0277-02

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, OH 45402-2911

Dear Mr. Saric and Mr. Schneider:

**TRANSMITTAL OF THE COMMENT RESPONSE DOCUMENT THAT ADDRESSES THE
OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE PROJECT
SPECIFIC PLAN FOR THE INSTALLATION OF MONITORING WELLS IN THE PILOT
PLANT DRAINAGE DITCH PLUME**

Reference: Letter, T Schneider to J. Reising, "Comments on Pilot Plant Drainage Ditch
Monitoring Wells," dated January 8, 2002

The purpose of this letter is to transmit the subject Comment Response Document for
your review.

If you have any questions about the comment responses, please contact Robert Janke at
(513) 648-3124.

Sincerely,

Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP: R. J. Janke

Enclosure: As Stated

**RESPONSES TO OHIO EPA COMMENTS ON
THE PSP FOR THE INSTALLATION OF MONITORING WELLS
IN THE PILOT PLANT DRAINAGE DITCH PLUME**

**FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO**

JANUARY 2002

U.S. DEPARTMENT OF ENERGY

on the ground or on sawhorses. We agree that these methods are appropriate but we suggest that the CMT be fabricated and tested in the 'shop' rather than in the 'field'. Similarly, elsewhere the plan states that a standard hand drill with a drill stop will be used to place the holes in the CMT. If this technology proves useful enough to warrant the deployment of enough CMT wells, it may prove worthwhile to use a drill press instead of a hand drill. Placing the CMT in a simple jig and using a drill press should reduce the potential for miss-drilled holes.

Response: The CMTs are and will continue to be tested in the shop. DOE has considered using a drill press to reduce the potential for miss-drilled holes. The technician in-charge of drilling the holes prefers not to use a drill press, as he feels that it would be too restrictive and inefficient due to the difficulty in working with long tubing lengths in a "shop" setting. Using a hand drill allows the technician to more accurately line up the tubing to drill holes. Instead of using a drill press, it was decided to drill smaller holes (1/4 inch) and equip the hand drill with a drill stop. The smaller holes provide more clearance between the channel walls and the drill stop aids in restricting the depth of the hole to avoid puncturing the inner channel.

Action: Future PSPs will call for 1/4" holes.

6. Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
 Section #: 3.2.2 Pg. #: 7 Line #: 13 Code: C
 General Comment: 6

Comment: A basis is provided for the elevations of each monitoring zone. What is the basis for selecting a 10-foot length for each monitoring interval? The selection of such a long open interval with only a three-foot blank zone separating the intervals may result in cross-contamination between adjacent intervals. A reduction of the sampling interval length may achieve monitoring objectives without uncertainty regarding the independence of adjacent samples.

Response: The 10-foot length of screen was selected as being representative of the typical monitoring well. Purging and sampling will take place near the top of the water column to increase the probability that the water being drawn from the screened zone represents a mixture from over the entire zone. Uranium concentrations measured in groundwater samples collected from the CMT wells will represent an average constituent concentration for the entire 10-foot length of screen. The sampling rate for these wells is on the order of 200 ml/minute (approximately 0.05 gpm). The aquifer yield is on the order of hundreds to thousands of gallons per minute. Given the slow sampling rate, high yield of the aquifer, and the fact that the horizontal hydraulic conductivity is much greater than the vertical hydraulic conductivity (modeled 10:1) DOE does not agree that contamination between intervals is a concern.

Action: No action required.

7. Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
 Section #: 3.2.2 Pg. #: 7 Line #: 17 Code: C
 General Comment: 7

Comment: The pressure test referenced by the text is discussed in detail in the December 3, 2001 Weekly EPA Conference Call Information fax. This information should be included in the PSP.

Response: The pressure tests needed for the installation of the CMT Wells discussed in this PSP have already been conducted. The information detailed in the December 3, 2001 Weekly EPA Conference Call Information Facsimile will be included in future PSPs as suggested.

Action: As stated in the response.

8. Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
 Section #: 3.2.2 Pg. #: 7 Line #: 17 Code: C
 General Comment: 8

Comment: The text indicates that each channel may be pressure tested for leaks. Some form of routine

pressure testing should be conducted on all channels after drilling the port and drain holes. This testing is necessary to verify that the center chamber and lateral chamber walls have not been perforated accidentally during drilling. This testing is especially critical given the large number of holes (91 per each 10 foot monitoring zone, 546 per each CMT installation) that will need to be constructed using a hand-operated power drill. Are factory-installed holes and associated pressure testing/quality verification an option?

Response: Routine testing is conducted on all channels after drilling the port and drain holes. DOE agrees that this testing is necessary. The idea of allowing the factory to drill the holes was considered during the planning process, but not pursued. It was felt that damage could occur to the tubing during transit, so that the tubing would just need to be re-tested subsequent to delivery at the FEMP and prior to installation.

Action: As stated in response.

9. Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
Section #: 3.2.2 Pg.#: 7 Line #: 20 Code: C

General Comment: 9

Comment: The text should clearly indicate how many 4-inch subintervals will be installed in each monitoring zone.

Response: DOE agrees that the text should be more clear as to the number of 4-inch subintervals that will be installed in each monitoring zone. The wells discussed in this PSP have already been installed, but future PSPs will clearly indicate how many 4-inch subintervals will be installed.

Action: As stated in response.

10. Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
Section #: 3.2.2 Pg.#: Figure 4 Line #: Code: C

General Comment: 10

Comment: Text on the right side of the figure indicates that each 10-foot monitoring zone will be wrapped with three four-inch long mesh screens. Unless DOE intends to not screen some portholes, it appears, based on the distribution of holes shown on the figure, that 30 four-inch long mesh screens will be necessary. Also, the cross-sectional view should be revised to include a divider between channels 5 and 6.

Response: All of the holes are covered by screens. There was a typo in the text on the right side of the figure. It should read, "Each 10-foot monitoring zone wrapped with 30, 4-inch long, 0.10 mesh screens." DOE agrees that there should be a divider between Channels 5 and 6. Since the wells are already installed there is no need to go back and revise the figure in this PSP, but the correction will be made in future PSPs.

Action: As stated in response.

11. Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
Section #: 3.2.2 Pg.#: 7 Line #: 30 Code: C

General Comment: 11

Comment: The text should note that care should be taken to make sure that the glue is fully melted before extrusion to form the plug. Failure to fully melt the glue could potentially result in a poor seal. In addition, the PSP should specify that only low density polyethylene (Arrow-CS-7 4" sticks of white sealer/glue) glue will be used for CMT well plug construction, as per manufacturer's recommendation.

Response: The "glue" is actually polyethylene hot melt. Future PSPs will not refer to it as glue. Manufacturers recommendations were followed when installing the hot melt to create the channel plugs, which required slow extrusion of the low density polyethylene (Arrow CS-7 4") hot melt. This will be noted in future PSP revisions.

Action: As stated in response.

12. Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
Section #: 3.2.2 Pg.#: 8 Line #: 22 Code: C
General Comment: 12
Comment: The text should indicate that the top of the CMT tubing will be accurately surveyed for coordinates and elevation.
Response: This is a standard practice upon completion of any monitoring well. Requirements for doing this are found in our operating procedures.
Action: As stated in response.